

CLAIMS

1. A device for packaging and dispensing several fluid products, of the type comprising at least two extraction pumps with parallel axes and at least two containers containing the products to be dispensed, characterized in that the first pump (8) is mounted so that it can move axially in the chamber of the second pump (9), such that the movement of the first pump operates the second pump.
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2. The device for packaging and dispensing several fluid products as claimed in claim 1, characterized in that it comprises a single push-button acting on the piston of the first pump and in that it comprises means such that the movement of the push-button displaces the body of the first pump and the piston of the second pump in the chamber of the second pump.
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3. The device as claimed in any one of the preceding claims, characterized in that it comprises means for expelling the products contained in the containers sequentially.
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4. The device as claimed in any one of the preceding claims, characterized in that each pump comprises a dip tube communicating with independent containers.
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5. The device as claimed in claim 4, characterized in that each container consists of a sealed flexible bag (2, 3) placed in the same single rigid container (1) and comprising means cooperating with at least one ring (6) for fastening to the rigid container and with the pumps.
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6. The device as claimed in claim 5, characterized in that it comprises at least two bags (2, 3) combined with a single ring (6) for fastening to the container and to the pumps.
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7. The device as claimed in either of claims 5 and 6, characterized in that it comprises two bags made from different materials.
- 10 8. The device as claimed in any either of claims 5 and 6, characterized in that it comprises two bags (2', 3'), one inside the other, the neck of the larger bag surrounding that of the smaller one, a sufficient space being left between the two necks
15 for filling with and expelling the product.
9. The device as claimed in either of claims 5 and 6, characterized in that it comprises two bags formed as a single piece, in the form of a double bag
20 comprising two compartments separated by a partition.
10. The device as claimed in any one of claims 5 to 9, characterized in that bags are fastened by
25 snapping their necks onto the ring.
11. The device as claimed in any one of claims 5 to 9, characterized in that the bags are produced by injection-blow molding or extrusion-blow molding a
30 material chosen from among a polyethylene, a polypropylene, a polyamide, and an ethylene/vinyl alcohol (EVOH) copolymer.
12. The device as claimed in any one of claims 5 to 9,
35 characterized in that the bags are produced by welding a plastic or metal film or a multilayer metal/plastic complex on a support forming the neck of the bag.

13. The device as claimed in any one of claims 5 to 12, characterized in that it comprises an air circuit between the outside and the volume between
5 the wall of the rigid container and the bags.
14. The device as claimed in claim 13, characterized in that the air circuit consists of a vent in the
10 wall of the rigid container, equipped with a valve and/or a filter.
15. The device as claimed in claim 13, characterized in that the air circuit consists of a passage (21,
15 20) made in the ring and the body of the first pump, communicating with the space between the first pump and the push-button, and comprising means for closing it off when the pump is not actuated.
- 20 16. The device as claimed in claim 1, characterized in that it comprises juxtaposed or concentric product outlet nozzles, to ensure the mixing of the products from each bag.
- 25 17. The device as claimed in claim 16, characterized in that the outlet nozzle comprises two concentric annular orifices (31) and (32) covered by the same elastic film (33) that can deform to allow the fluids coming from the pumps to exit.
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18. The device as claimed in claim 16, characterized in that the pump outlet ducts are joined to emerge in a common outlet nozzle where the mixing takes place.
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19. The device as claimed in any one of the preceding claims, characterized in that the containers have different volumes.

20. The device as claimed in any one of the preceding claims, characterized in that the volume of the metering chamber of each pump (8, 9) is proportional to the volume of the corresponding container.

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